UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *13 April 2004*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-31* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-31* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the application filed on April 13, 2001 .Claims

1 – 31 are pending examinations.

Claim Objections

2.   Claim 23 is objected to because of the following informalities: applicant is

advised to remove the phrase " (downstream device = network device) " in line

19, also claim numbering is wrong because claim number 23 is repeated two

times yet the content of both claims are different. Appropriate correction is

required. Examiner will treat the claim as a new claim totaling the number of

claims to 32 instead of 31.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 recites the limitation "acknowledgment" There is insufficient

antecedent basis for this limitation in the claim. It is not clear whether the

acknowledgment refers to first message or second message.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors

Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology

Technical Amendments Act of 2002 do not apply when the reference is a U.S.

patent resulting directly or indirectly from an international application filed before

November 29, 2000. Therefore, the prior art date of the reference is determined

under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C.

102(e)).

3.   Claims 1 – 4, 6 – 20 and 22 – 31 are rejected under U.S.C 102(e) as

being anticipated by Swildens et al. U.S. Patent No. 6,754,706.

As to claim 1, Swildens teaches in a network device in a network, a

method of establishing a communications path through the network device for a

stream of data (see col. 1 – col. 12 and fig.1 – fig. 6), the method comprising the

steps of:

receiving a first data distribution message from an upstream device in the

network (see col. 4 lines 3 – 7 and fig. 1 Swildens teaches a first data distribution method from a device by receiving a request by the client DNS server upon a request from user);

acknowledging receipt of the first data distribution message to the upstream device in the network (see col. 7 line 60 – col. 8 line 5, Swildens teaches the message back to user as a n acknowledgment receipt) ;

forwarding a second data distribution message to a downstream device in the network (see col.4 lines 39 – 46 and fig.2 and fig.3 , Swildens teaches the second data distribution to a device in network by sending the request from the client DNS server to DNS server, therefore forwarding the second message to DNS server in the network) ; and

determining if the network device receives an acknowledgment of receipt of the second data distribution message, and if the network device receives an acknowledgment, establishing at least one path through the network device for a stream of data identified by the first data distribution message between the upstream device and a downstream device identified in the acknowledgment.(see col. 6 lines 22 – 37 , Swildens teaches the acknowledgment of receipt of second data and establishing a path by sending a ping packet from DNS server to client DNS server and use the router closest to client DNS, also Swildens teaches the use of address in determining the path of transmission of data).

As to claim 2, Swildens teaches the method of claim I wherein the step of receiving a first data distribution message from an upstream device in the network comprises the steps of:

obtaining, from the first data distribution message, a stream identifier that identifies the stream of data for which the communications path is to be established through the network device (see col. 6 lines 66 – col. 7 line 13, Swildens teaches the request of an IP address as a stream identifier for path establishment through network device) ;

storing the stream identifier in a path table, the path table used by a data distribution process in the network device to identify paths for the stream of data through the network device (see col. 4 line 20 – 27, Swildens teaches the size of persistent tables on each server is required as storing of stream identifier where the persistent is when the first time a request is made for an IP address , it is stored on a server to tie the user IP address) ; and

configuring an upstream device identifier in the second data distribution message with an identity of the network device that received the first data distribution message (see col.5 lines 29 – 53 Swildens teaches assigning a close IP address as configuring stream identifier in a path table).

As to claim 3, Swildens teaches the method wherein the step of establishing at least one path through the network device between the upstream device and the downstream device comprises the steps of:

obtaining a downstream device identifier from within the acknowledgment, the downstream device identifier identifying a downstream network device that

supports the data distribution protocol and that originated the acknowledgment

(see col.4 lines 9 – 14 Swildens teaches the device identification by identifying

the group of users using client DNS server) ;

obtaining a stream identifier from within the acknowledgment, the stream

identifier identifying a stream of data to which the acknowledgment is associated

(see col. 6 lines 66 - col. 7 line 13, Swildens teaches hostnames requiring

persistence or connection as obtaining stream identifier); and

creating a path entry in the path table for a stream of data identified by the

stream identifier in the acknowledgment received by the network device by

associating the downstream device identifier to the stream identifier in the path

table to create a path for the stream of data to each downstream device

associated with the stream identifier (see col. 6 lines 22 - 37 , Swildens teaches

the forwarding request to specific server , hence teaching the path to the device

identification and the path created by the stream).

As to claim 4, Swildens teaches the method wherein the stream identifier

includes at least one of:

i) a data indicator for the stream of data; and

ii) an identification of the server computer system providing the stream of

data (see col. 39 – 52 Swildens teaches the forwarding request to specific

server , hence teaching the device identification).

As to claim 6, Swildens teaches the method wherein if, in the step

determining if the network device receives an acknowledgment on the

communications interface of receipt of the second data distribution message, the

network device determines that it did not receive the acknowledgment, the

method performs the operations of:

establishing at least one host path through the network device for the

stream of data, the at least one host path indicating that a host device coupled to

the network device is to receive the stream of data (see col. 2 , lines 43 – 56,

Swildens teaches the establishment of a path as a reception of request from

client DNS) ; and

receiving a payload distribution message containing the stream of data, the

payload distribution message being associated with a stream identifier in the path table

(see col.2 lines 43 – 51 Swildens teaches receiving a request and directing the request

to the proper DNS after consulting a path table);

removing payload data from the payload distribution message (see col. 2

lines 51 – 56 Swildens the removing of the payload if a persistent response is not

required hence determining the load) ; and

forwarding the payload data to the host device as the stream of data (see

col.2, lines 45 – 47 , Swildens teaches forwarding of the payload to the proper

server).

As to claim 7, Swildens teaches the method further including the steps of:

receiving a payload distribution message from an upstream device in the

network, the payload distribution message containing a stream identifier

associated with the at least one path through the network device (see col.2, lines

43 – 51 Swildens teaches receiving a request and directing the request to the

proper DNS after consulting a path table) ;

consulting a path table containing the at least one path through the

network device to determine each path on which to forward the payload

distribution message (see col.5 lines 58 – 61 Swildens consult a table to see

which of the address to use for the payload date to forward, hence determine

which path to take); and

forwarding the payload distribution message on each path determined

from the step of consulting the path table such that downstream network devices

can receive the payload distribution message (see col.5 lines 20 – 43 Swildens

teaches consulting a table of latency to determine which DNS server on the

network should the message directed to).

As to claim 8, Swildens teaches the method of wherein:

the acknowledgment includes a downstream device identifier identifying

the network device as a downstream device with respect to the upstream device

that originated the first data distribution message and to which the

acknowledgement is forwarded (see col.4 lines 9 – 14 Swildens teaches the

device identification by identifying the group of users using client DNS server) ;

the acknowledgment includes a stream identifier identifying a stream of

data to which the acknowledgment is associated (see col.6 lines 66 - col.7 line 13

Swildens teaches hostnames requiring persistence or connection as obtaining

stream identifier hence identifying the data requested); and

wherein the acknowledgement is received the by the upstream device that

originated the second data distribution message and is treated as a downstream

acknowledgement forwarded from the downstream network device (see col. 6 lines 22 – 37 , Swildens teaches the acknowledgment of receipt of second data and establishing a path by sending a ping packet from DNS server to client DNS server and use the router closest to client DNS, also Swildens teaches the use of address in determining the path of transmission of data).

As to claim 9, Swildens teaches the method wherein the downstream device is a network device and wherein the step of forwarding forwards the entire first data distribution message to the downstream device such that the downstream device can establish a communications path through the network for the stream of data (see col.6 line 66 – col.7 line 13, Swildens teaches the establishment of communication between hostnames and the DNS server and forwarding the request to the designated DNS server).

As to claim 10, Swildens teaches the method wherein:
the downstream device is a host device that requested receipt of the stream of data (see col.2 lines 43 – 56 Swildens teaches the reception of request by a controller) ; and

wherein the step of forwarding comprises the step of:

forwarding a payload portion of the stream of data in the first data distribution message to the host device such that the host device can receive the stream of data over the communications path through the network (see col.2 lines 45 – 51 Swildens teaches the client DNS server forwarding the payload of the request to the DNS server hence establishing communication path through the network) .

As to claim 11, Swildens teaches the method wherein:

the first data distribution message contains a destination network address identifying a host device which provided a request to a server device for the stream of data served from the server device (see col. 4 lines 3 – 7 and fig.1 , Swildens teaches a first data distribution method from a device by receiving a request by the client DNS server upon a request from user); and

wherein the step of forwarding forwards the second data distribution message to a downstream device using a routing protocol that selects a route that forwards the second data distribution message towards a host device which provided the request to the stream device for the stream of data (see col. 3 line 66 – col. 4 , line 7 Swildens teaches the routing scheme of the request by resolving the name by routing the request to the DNS server) .

As to claim 12, Swildens teaches the method wherein if the routing protocol determines that there are multiple routes that can be used to forward the second data distribution message towards ' a host device which provided the request to the server device for the stream of data, the routing protocol selects a route to a downstream network device that contains an established path for the stream of data identified by a stream identifier within the first data distribution message. (see col.6 lines 66 – col. 7 , line 13 Swildens teaches the IP address that is connected to multiple servers on the net and the establishment of a path to route the message to).

As to claim 13, Swildens teaches the method further including the steps of:

receiving a portion of data associated with the stream of data, the portion

of data originating from a server device that serves the stream of data and

including a data distribution header containing a stream identifier for this portion

of data (see col.6 lines 66 – col. 7, line13; Swildens teaches the establishment of

communication between hostnames and the DNS server and forwarding the

request to the designated DNS server); and

forwarding the portion of data to a downstream device associated with

each of the at least one path for the stream of data as identified in a path table

associated with the stream identifier, such that the portion of data is distributed

on each of the at least one path in the path table towards host devices that

requested to receive the stream of data (see col.4 lines 39 – 45 Swildens

teaches the forwarding of the portion of the data or the request to the proper

server using the IP address that directs the request to the proper destination).

As to claim 14, Swildens teaches a method of propagating payload data

through a network device in a network, the method comprising the steps of:

receiving a payload distribution message containing a data distribution

header which includes a stream identifier identifying a stream of data (see col.2,

lines 43 – 51 Swildens teaches receiving a request and directing the request to

the proper DNS after consulting a path table) ;

based on the stream identifier, consulting a path table to determine each

path on which to forward at least a portion of the payload distribution message to

a downstream device in the network (see col.5 lines 58 – 61 Swildens consult a

table to see which of the address to use for the payload date to forward, hence

determine which path to take) ; and

forwarding, for each path in the path table, at least a portion of the payload

distribution message to a downstream device in the network such that the

downstream device receives payload data within the payload distribution

message (see col.5 lines 20 – 43 Swildens teaches consulting a table of latency

to determine which DNS server on the network should the message directed to).

As to claim 15, Swildens teaches the method wherein at least one

downstream device in the network is a host device and wherein the step of

forwarding, for each path in the path table, at least a portion of the payload

distribution message to a downstream device in the network includes the steps

of:

extracting, for each host path in the path table, payload data from the

payload distribution message (see col.2 lines 52 – 56 Swildens teaches the

asking for an address of a resource); and

forwarding the payload data to the host device such that the host device

receives the payload data received by the network device within the payload

distribution message (see col. 2 lines 65 – 67 Swildens teaches the DNS server

receiving the request).

As to claim 16, Swildens teaches the method wherein the payload data is

stream data and wherein the step of extracting, for each host path in the path

table, further includes the step of:

extracting header information for the stream data from the payload

distribution message (see col.8 lines 10 – 24 Swildens teaches DNS server

checks where the request should be directed by looking at the header

information which Swildens refers to as keys) ; and

creating a packet for receipt by the host device, the packet including the

header information for the stream data and including the stream data extracted

from the payload distribution message (see col. 8 lines 10 – 32 Swildens

teaches the check group partition module as packet of data to be transmitted

through a network) ; and

wherein the step of forwarding the payload data to the host device

comprises forwarding the packet for receipt by the host device such that the host

device receives a packet of stream data (see col. 2 line 65 –67 Swildens

teaches the forwarding of the data to the DNS server).

As to claim 17, Swildens teaches a network device comprising :

a communications interface; a memory system; a processor; and

an interconnection mechanism coupling the communications interface, the

 memory system, and the processor,

wherein the memory system is configured with a data distribution

application, that when performed on the processor, provides a data distribution

process that , establishes a communications path through the network device in

a network for a stream of data by performing the operations of(see col. 1 – col.

12 and fig.1 – fig. 6) :

receiving, via the communications interface, a first data distribution message

from an upstream device in the network (see col. 4 lines 3 – 7 and fig. 1

Swildens teaches a first data distribution method from a device by receiving a

request by the client DNS server upon a request from user) ;

acknowledging receipt of the first data distribution message to the

upstream device in the network (see col. 7 line 60 – col. 8 line 5, Swildens

teaches the message back to user as a n acknowledgment receipt) ;

forwarding, via the communications interface, a second data distribution

message to a downstream device in the network (see col.4 lines 39 – 46 and

fig.2 and fig.3 , Swildens teaches the second data distribution to a device in

network by sending the request from the client DNS server to DNS server,

therefore forwarding the second message to DNS server in the network) ; and

determining if the network device receives an acknowledgment of receipt

of the second data distribution message, and if the network device receives an

acknowledgment, establishing, in the memory system, at least one path through

the network device for a stream of data identified by the first data distribution

message between the upstream device and a downstream device identified in

the acknowledgment (see col. 6 lines 22 – 37 , Swildens teaches the

acknowledgment of receipt of second data and establishing a path by sending a

ping packet from DNS server to client DNS server and use the router closest to

client DNS, also Swildens teaches the use of address in determining the path of

transmission of data).

As to claim 18, Swildens teaches the network device wherein when the

data distribution process performs the operation of receiving a first data

distribution message from an upstream device in the network, the data

distribution process performs the operations of:

obtaining, from the first data distribution message in the memory system, a

stream identifier that identifies the stream of data for which the communications

path is to be established through the network device (see col. 6 lines 66 – col. 7

line 13, Swildens teaches the request of an IP address as a stream identifier for

path establishment through network device) ;

storing the stream identifier in a path table in the memory system, the path

table used by a data distribution process in the network device to identify paths

for the stream of data through the network (see col. 4 line 20 – 27, Swildens

teaches the size of persistent tables on each server is required as storing of

stream identifier where the persistent is when the first time a request is made for

an IP address , it is stored on a server to tie the user IP address) ; and

configuring an upstream device identifier in the second data distribution

message in the memory system with an identity of the network device that

received the first data distribution message (see col.5 lines 29 – 53 Swildens

teaches assigning a close IP address as configuring stream identifier in a path

table).

As to claim 19, Swildens teaches the network device wherein when the

data distribution process performs the operation of establishing at least one path

through the network device between the stream device and the downstream

device, the data distribution process performs the operations of:

obtaining a downstream device identifier from within the acknowledgment

in the memory system, the downstream device identifier identifying a

downstream network device that supports the data distribution protocol and that

originated the acknowledgment (see col.4 lines 9 – 14 Swildens teaches the

device identification by identifying the group of users using client DNS server);

obtaining a stream identifier from within the acknowledgment in the

memory system, the stream identifier identifying a stream of data to which the

acknowledgment is associated (see col. 6 lines 66 - col. 7 line 13,   Swildens

teaches hostnames requiring persistence or connection as obtaining stream

identifier); and

creating a path entry in the path table for a stream of data identified by the

stream identifier in the acknowledgment received by the network device by

associating the downstream device identifier to the stream identifier in the path

table to create a path for the stream of data to each downstream device

associated with the stream identifier (see col. 6 lines 22 - 37 , Swildens teaches

the forwarding request to specific server , hence teaching the path to the device

identification and the path created by the stream).

As to claim 20, Swildens teaches   the network device wherein the stream

identifier includes at least one of:

i) a data indicator for the stream of data; and

ii) an identification of the server computer system providing the stream of data .

(see col. 39 – 52 Swildens teaches the forwarding request to specific server ,

hence teaching the device identification).

As to claim 22, Swildens teaches t he network device of wherein when

the data distribution process performs the operation of determining if the network

device receives an acknowledgment on the communications interface of receipt

of the second data distribution message, if the network device does not receive

the acknowledgment, the data distribution process performs the operations of:

establishing, in a path table in the memory system, at least one host path

through the network device for the stream of data, the at least one host path

indicating that a host device coupled to the network device is to receive the

stream of data (see col. 2 , lines 43 – 56,   Swildens teaches the establishment

of a path as a reception of request from client DNS) ; and

receiving, via the communications interface, a payload distribution

message containing the stream of data, the payload distribution message being

associated with a stream identifier in the path table (see col.2 lines 43 – 51

Swildens teaches receiving a request and directing the request to the proper

DNS after consulting a path table) ;

removing payload data from the payload distribution message (see col. 2

lines 51 – 56 Swildens the removing of the payload if a persistent response is not

required hence determining the load) ; and

forwarding the payload data to the host device as the stream of data (see

col.2, lines 45 – 47 , Swildens teaches forwarding of the payload to the proper

server).

As to claim 23 Swildens teaches the network device wherein the data

distribution process further performs the operation of:

receiving, via the communications interface, a payload distribution

message from an upstream device in the network, the payload distribution

message containing a stream identifier associated with the at least one path

through the network device (see col.2, lines 43 – 51 Swildens teaches receiving

a request and directing the request to the proper DNS after consulting a path

table) ;

consulting a path table in the memory system containing the at least one

path through the network device to determine each path on which to forward the

payload distribution message (see col.5 lines 58 – 61 Swildens consult a table to

see which of the address to use for the payload date to forward, hence determine

which path to take) ; and

forwarding the payload distribution message on each path determined

from the step of consulting the path table such that downstream network devices

can receive the payload distribution message (see col.5 lines 20 – 43 Swildens

teaches consulting a table of latency to determine which DNS server on the

network should the message directed to).

As to claim 23, Swildens teaches the network device of wherein:

the acknowledgment includes a downstream device identifier identifying the

network device ms a downstream device with respect to the upstream device that
originated the first data distribution message and to which the acknowledgement
is forwarded ;

the acknowledgment includes a stream identifier identifying a stream of
data to which the acknowledgment is associated (see col.6 lines 66 - col.7 line
13 Swildens teaches hostnames requiring persistence or connection as
obtaining stream identifier hence identifying the data requested) ; and

wherein the acknowledgement is received the by the upstream device that
originated the data distribution message and is treated as an acknowledgement
forwarded from the network device (see col. 6 lines 22 – 37 , Swildens teaches
the acknowledgment of receipt of second data and establishing a path by
sending a ping packet from DNS server to client DNS server and use the router
closest to client DNS, also Swildens teaches the use of address in determining
the path of transmission of data).

As to claim 24, Swildens teaches the network device wherein the
downstream device is a network device and wherein when the data distribution
process performs the operation of forwarding, the data distribution process
forwards the entire first data distribution message to the downstream device such
that the downstream device can establish a communications path through the
network for the stream of data (see col.6 line 66 – col.7 line 13, Swildens
teaches the establishment of communication between hostnames and the DNS
server and forwarding the request to the designated DNS server).

As to claim 25, Swildens teaches the network device wherein:

the downstream device is a host device that requested receipt of the stream of

data (see col.2 lines 43 – 56 Swildens teaches the reception of request by a

controller); and

wherein when the data distribution process performs the operation of

forwarding, the data distribution process performs the operation of:

forwarding a payload portion of the stream of data in the first data

distribution message to the host device such that the host device can receive the

stream of data over the communications path through the network(see col.2

lines 45 – 51 Swildens teaches the client DNS server forwarding the payload of

the request to the DNS server hence establishing communication path through

the network) .

As to claim 26, Swildens teaches the network device wherein:

the first data distribution message contains a destination network address

identifying a host device which provided a request to a server device for the

stream of data served from the server device (see col. 4 lines 3 – 7 and fig.1 ,

Swildens teaches a first data distribution method from a device by receiving a

request by the client DNS server upon a request from user) ; and

wherein when the data distribution process performs the operation of

forwarding, the network device forwards the at least a portion of the second data

distribution message to a downstream device using a routing protocol that

selects a route that forwards the second data distribution message towards a

host device which provided the request to the server device for the stream of

data (see col. 3 line 66 – col. 4 , line 7 Swildens teaches the routing scheme of

the request by resolving the name by routing the request to the DNS server).

As to claim 27, Swildens teaches the network device wherein if

network device operating the routing protocol determines that there are multiple

routes that can be used to forward the second data distribution message towards

a host device which provided the request to the server device for the stream of

data, the network device operates the routing protocol to select a route to a

downstream network device that contains an established path for the stream of

data identified by a stream identifier within the first data distribution message

(see col. 39 – 52 Swildens teaches the forwarding request to specific server ,

hence teaching the device identification).

As to claim 28, Swildens teaches the network device wherein the data

distribution process further performs the operations:

receiving a portion of data associated with the stream of data, the portion

of data originating from a server device that serves the stream of data and

including a data distribution header containing a stream identifier for this portion

of data (see col.6 lines 66 – col. 7, line13; Swildens teaches the establishment

of communication between hostnames and the DNS server and forwarding the

request to the designated DNS server) ; and

forwarding the portion of data to a downstream device associated with

each of the at least one path for the stream of data as identified in a path table

associated with the stream identifier, such that the portion of data is distributed

on each of the at least one path in the path table towards host devices that

requested to receive the stream of data (see col.4 lines 39 – 45 Swildens

teaches the forwarding of the portion of the data or the request to the proper

server using the IP address that directs the request to the proper destination).

As to claim 29, Swildens teaches a computer program product having a

computer-readable medium including data distribution application computer

program logic encoded thereon for establishing a communications path through

the network device in a network for a stream of data, such that the computer

program logic, when performed on at least one processor within a

communications device, causes the at least one processor to perform the

operations of:

receiving a first data distribution message from an upstream device in the

network (see col.2, lines 43 – 51 Swildens teaches receiving a request and

directing the request to the proper DNS server)

acknowledging receipt of the first data distribution message to the

upstream device in the network ,   Swildens teaches hostnames requiring

persistence or connection as obtaining stream identifier, where the device

receives hostnames that requesting connection to the server) ;

forwarding a second data distribution message to a downstream device in

the network (see col.5 lines 20 – 43 Swildens teaches consulting a table of

latency to determine which DNS server on the network should the message be

forwarded to) ; and

determining if the network device receives an acknowledgment of receipt

of the second data distribution message, and if the network device receives an

acknowledgment, establishing at least one path through the network device for a

stream of data identified means for receiving a first data distribution message

from an upstream device in the network (see col.5 lines 20 – 43 Swildens

teaches consulting a table of latency to determine which DNS server on the

network should the message be forwarded to) .

As to claim 30, Swildens teaches a network device comprising:

A communications interface

a memory system;

a processor; and

an interconnection mechanism coupling the communications interface, the

memory system, and the processor;

wherein the memory system is configured with a data distribution

application, that when performed on the processor, provides a means for

establishing a communications path through the network device in a network for

a stream of data, the means including ;

means for receiving a first data distribution message from an upstream

device in the network (see col. 4 lines 3 – 7 and fig. 1 Swildens teaches a first

data distribution method from a device by receiving a request by the client DNS

server upon a request from user) ;

means for acknowledging receipt of the first data distribution message to

the upstream device in the network (see col. 7 line 60 – col. 8 line 5, Swildens

teaches the message back to user as a n acknowledgment receipt) ;

means for forwarding a second data distribution message to a

downstream device in the network (see col.4 lines 39 – 46 and fig.2 and fig.3 ,

Swildens teaches the second data distribution to a device in network by sending

the request from the client DNS server to DNS server, therefore forwarding the

second message to DNS server in the network) ; and

means for determining if the network device receives an acknowledgment

of receipt of the second data distribution message, and if the network device

receives an acknowledgment, establishing at least one path through the network

device for a stream of data identified by the first data distribution message

between the upstream device and a downstream device identified in the

acknowledgment (see col. 6 lines 22 – 37 , Swildens teaches the

acknowledgment of receipt of second data and establishing a path by sending a

ping packet from DNS server to client DNS server and use the router closest to

client DNS, also Swildens teaches the use of address in determining the path of

transmission of data).

As to claim 31 Swildens teaches a packet transportable in a network, the

packet embodied in a computer readable medium, the packet containing:

a standard packet header portion containing a destination address of a

device in the network (see col. 8 lines 10 – 24 and fig. 6 Swildens teaches the

data transferring from one device to another device within a network based upon

IP address) ;

a data distribution header portion encapsulated by the standard packet

header portion, the data distribution header containing a stream identifier

identifying a stream of data for which a path can be established through at least

one network device in the network(see col. 8 lines 10 – 24 and fig. 6 Swildens

teaches how the data is routed according to the packet information when the IP

address replace the address with another address to rout the data to the right

destination) ; and

a payload portion containing data to be delivered to a host device in the network

(see col.2 , lines 65 – 67 Swildens teaches the delivery of the request to a

specific host in the wet work).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5 and rejected under 35 U.S.C. 103(a) as being unpatentable over

Swildens et al. U.S. Patent No. 6,754,706   and further in view of Hingorani et al.

U.S. Patent No. 6,708,215.

Swildens teaches the invention substantially as claimed including :

In a network device in a network, a method of establishing a

communications path through the network device for a stream of data (see col. 1

– col. 12 and fig.1 – fig. 6), the method comprising the steps of:

receiving a first data distribution message from an upstream device in the

network (see col. 4 lines 3 – 7 and fig. 1 Swildens teaches a first data distribution method from a device by receiving a request by the client DNS server upon a request from user);

acknowledging receipt of the first data distribution message to the upstream device in the network (see col. 7 line 60 – col. 8 line 5, Swildens teaches the message back to user as a n acknowledgment receipt) ;

forwarding a second data distribution message to a downstream device in the network (see col.4 lines 39 – 46 and fig.2 and fig.3 , Swildens teaches the second data distribution to a device in network by sending the request from the client DNS server to DNS server, therefore forwarding the second message to DNS server in the network) ; and

determining if the network device receives an acknowledgment of receipt of the second data distribution message, and if the network device receives an acknowledgment, establishing at least one path through the network device for a stream of data identified by the first data distribution message between the upstream device and a downstream device identified in the acknowledgment.(see col. 6 lines 22 – 37 , Swildens teaches the acknowledgment of receipt of second data and establishing a path by sending a ping packet from DNS server to client DNS server and use the router closest to client DNS, also Swildens teaches the use of address in determining the path of transmission of data).

Swildens does not explicitly teach the method wherein the step of creating

a path entry in the path entry table for the stream of data identified by the stream

identifier further comprises of the step of:

Incrementing a host device counter associated with the path entry in the

table for the stream of data in order to track how many host devices use the path

defined by the path entry in the network device to receive the stream of data.

Hingorani teaches the Incrementing a host device counter associated with

the path entry in the table for the stream of data in order to track how many host

devices use the path defined by the path entry in the network device to receive

the stream of data (see col.9 line 39 – col. 10 line 6, Hongrani teaches a

counter to monitor user activity regarding access network location, and content

retrieved from network location).

It would have been obvious to one of the ordinary skill in the art at the time

of the invention to modify Swildens invention by adding a counter to the

invention as in Hingorani to monitor user activities and to collect information

regarding access network and content retrieved.

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

-        Reallocating Address spaces of A Plurality of Servers Using A

         Load Balancing Policy And a Multicast Channel by Gupta et

         al.,U.S. Patent No.6,718,387

-        Method And System For Wide Area Network Load Balance by He

         et al., .,U.S. Patent No. 6671259.

Conclusion

4.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sargon N Nano whose telephone number is (703) 305-4651. The examiner can normally be reached on Monday – Friday from 8:30 – 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 308- 7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sargon Nano
Patent Examiner
8-6-2004

SALEH NAJJAR
PRIMARY EXAMINER